Amendments to the Claims

1. (currently amended): A capacitive sensor for sensing the level of a fluid in a vessel, ~~without the use of a float, the fluid having a permittivity different from that of air~~the sensor positioned proximate the vessel and separated from the fluid by a dielectric wall of the vessel, the sensor comprising:

~~having~~ at least two coplanar electrical conductors~~, the conductors forming a measured capacitance, the conductors~~ attached to a substrate and~~, the substrate and conductors together forming a sensing element, the conductors being~~ electrically insulated from one another, the conductors separated from one another by spacing, the spacing equal to at least two times the thickness of the~~fluid by a~~ dielectric wall~~material~~, the conductors forming a fringing field capacitance, the value of the capacitance changing in response to changes in the level of ~~sensing element positioned adjacent to~~ the fluid;

at least two of the conductors ~~and~~ driven by an alternating current electrical signal, the value of ~~conductors arranged on the substrate with a spacing such that~~ the ~~electric~~ fringing field ~~produced around the conductors by the electrical signal penetrates the dielectric material and further penetrates a distance into the measured fluid, the distance of penetration being sufficient to cause a change in the measured~~ capacitance indicative of ~~response to a change in~~ the level of the ~~measured~~ fluid.

2. (currently amended): The sensor of claim 1, wherein at least two of the conductors are configured as~~a set of parallel lines,~~ interdigital combs, zigzag lines, sinusoidal

lines, or meander lines.

3. (currently amended): The sensor of claim 1~~2~~, wherein at least a portion of the substrate~~dielectric material~~ is removed from the area of~~positioned between~~ the spacing,~~conductors;~~

~~a surface of the sensing element facing the fluid, at least a portion of the dielectric material between the conductors being shaped to~~ forming a depression, ~~or~~ opening or gap in the surface of the substrate that faces the fluid.

4. (currently amended): The sensor of claim 2~~1~~, wherein the conductors are thin metallic structures mounted onto a thin dielectric substrate, the sensor being~~form a~~ flexible to conform to an irregular dielectric surface of the vessel~~sensing element~~.

5. (canceled)

6. (currently amended): The sensor of claim 1, wherein the sensor has first and second faces, the first face of the sensor positioned proximate a dielectric wall of the vessel, the second face positioned proximate a front surface of a spacer:

the spacer comprising a bulk dielectric material having a relative permittivity and a thickness, the bulk dielectric material having a relative permittivity of less than 2, and a thickness of at least two times the thickness of the~~ing element has adhesive backing~~

~~for mounting to a~~ dielectric wall ~~of a vessel~~.

7. (currently amended): The sensor of claim ~~1~~6, wherein a~~n~~ back surface of the spacer is attached to an electrically conductive material that is ~~positioned approximately parallel to the sensing element on the opposite side as the measured fluid, and~~ connected to an electronic circuit or to ground.

8. (canceled)

9. (canceled)

10. (canceled)

11. (canceled)

12. (currently amended): A capacitive sensor for sensing a~~the~~ level of a fluid in a vessel~~without the use of a float~~, a dielectric wall of the vessel having an inner surface and an outer surface, the inner surface facing ~~sensor comprising a sensing element and an electronic circuit module,~~ the fluid ~~having a permittivity different from that of air~~, the sensor~~ing~~ fully embedded within the dielectric wall of the vessel, the sensor comprising:

~~element having~~ at least two coplanar electrical conductors ~~forming a measured~~

~~capacitance, the conductors being~~ electrically insulated from one another ~~by spacing~~, the conductors each having a width, the conductors together having an average width, the conductors separated from one another by spacing, the conductors together having an average spacing, ~~positioned adjacent to the fluid so that a change in the level of the fluid causes a change in the measured capacitance,~~ the average spacing being at least four times the average width of ~~maintained by attaching~~ the conductors ~~to, or embedding them within, a dielectric material, the conductors being electrically insulated from the fluid by the dielectric material, the electronic circuit module electrically connected to said sensing element and providing a measurement of capacitance between the conductors, the electronic circuit module providing an output for the indication of the fluid level~~.

13. (currently amended): The ~~capacitive~~ sensor of claim 12, wherein the dielectric wall has first and second thicknesses, the first thickness being an average distance between the conductors and the inner surface of the vessel, the second thickness being an average distance between the conductors and the outer surface of the vessel,

the first thickness being equal to less than one half of the average spacing, the second thickness being equal to at least two times the average spacing;

the conductors forming a fringing field capacitance that changes in response to changes in the level ~~sensing element is embedded into a dielectric wall of a device~~

~~that utilizes~~ of the fluid ~~level information~~.

14. (canceled)

15. (canceled)

16. (canceled)

17. (new): The sensor of claim 1, wherein the conductors each have a width, at least two of the conductors that form the fringing field capacitance having an average width and an average spacing, the average width being equal to, or less than, one fourth of the average spacing.

18. (new): The sensor of claim 17, wherein at least two of the conductors are configured as interdigital combs, the combs having fingers, the fingers inclined with a slant from horizontal, the value of the fringing field capacitance changing in a continuous fashion in response to changes in the level of the fluid.